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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,009

06/15/2006

Yukio Iizuka

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EXAMINER

BERMAN, JACK I

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,009	<b>Applicant(s)</b> IIZUKA ET AL.	
	<b>Examiner</b> Jack I. Berman	<b>Art Unit</b> 2881	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.  
     4a) Of the above claim(s) 1-16 and 26-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-23 is/are rejected.
- 7) ☒ Claim(s) 24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/15/06, 11/28/08</u> .                                       | 6) <input type="checkbox"/> Other: ____.                          |

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Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-9 and 48-51, drawn to a material activating device having a metal film formed on a surface of a layered support structure.

Group II, claim(s) 10, drawn to a material activating device having alternating conductive metal layers and insulating layers.

Group III, claim(s) 11 and 12, drawn to a material activating device having a metal layer and a graphite layer.

Group IV, claim(s) 13-16, drawn to a material activating device having a conductive metal layer formed by holding conductive metal particles or fibers by a holding means.

Group V, claim(s) 17-25, drawn to a material activating device having a hollow metal casing with a radioactive layer inside the casing.

Group VI, claim(s) 26-32, drawn to a material activating device having a conductive polymer layer disposed on one side of a radioactive layer.

Group VII, claim(s) 33-47, drawn to a material activating device having a radioactive means that includes radioactive mineral particles and conductive metal particles or fibers.

The inventions listed as Groups I-VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the different material activating devices of the different groups have completely different structures.

During a telephone conversation with Clifford Mass on February 27, 2009 a provisional election was made without traverse to prosecute the invention of Group V, claims 17-25.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

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1-16 and 26-51 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim 23 is objected to because of the following informalities: "plurality or corners" should read --plurality of corners--. Appropriate correction is required.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Suthanthiran (U. S. Patent No. 4,891,165). Suthanthiran discloses material activating device comprising: a radioactive layer of a radioactive means that emits radioactive rays for irradiating a material to be activated, and a conductive metal layer disposed on one side of the radioactive layer of the radioactive means so as to be interposed between the radioactive layer of the radioactive means and the material to be activated;

wherein the conductive metal layer is the wall of a hollow casing (formed by sleeves 11 and 12) of a conductive metal (see lines 1-2 in column 3),

the radioactive layer of the radioactive means is disposed inside the casing (see lines 20-24 in column 3), and

the casing is a tubular member having a circular cross section (see lines 60-61 in column 2).

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Claims 17, 18, 22, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Klinghoffer (U. S. Patent No. 2,269,027). Klinghoffer discloses a material activating device comprising: a radioactive layer of a radioactive means that emits radioactive rays for irradiating a material to be activated, and a conductive metal layer disposed on one side of the radioactive layer of the radioactive means so as to be interposed between the radioactive layer of the radioactive means and the material to be activated;

wherein the conductive metal layer is the wall of a hollow casing of a conductive metal (metal protecting plate 1, described at lines 49-52 in the left-hand column on page 1),

the radioactive layer (3) of the radioactive means is disposed inside the casing (as described at lines 3-5 in the right-hand column on page 1),

the casing is a tubular member having a rectangular cross section (as can be seen in the top view of the device illustrated in Fig. 2), and

a base member made of a conductive metal, closely attached to the casing and designed so as to be attached to the material to be activated (sheet 5, which may be formed of tin, a conductive metal, as described at lines 7-10 in the right-hand column on page 1), the base member having a plurality (i.e. four) of corners.

Claims 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kahn (U. S. Patent No. 2,269,458). Kahn discloses a material activating device comprising: a radioactive layer of a radioactive means that emits radioactive rays for irradiating a material to be activated, and a conductive metal layer disposed on one side of the radioactive layer of the radioactive means so as to be interposed between the radioactive layer of the radioactive means and the material to be activated;

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wherein the conductive metal layer is the wall of a hollow casing (conical tip portion 10) of a conductive metal wherein at least a part of the casing is formed in a conical shape and the part having the conical shape has an apex, and the radioactive layer of the radioactive means (radium pellet 11) is disposed inside the casing (see lines 4-10 in the right-hand column on page 1).

Claims 17 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Senftner (U. S. Patent No. 1,839,270). Senftner discloses a material activating device comprising: a radioactive layer of a radioactive means that emits radioactive rays for irradiating a material to be activated, and a conductive metal layer disposed on one side of the radioactive layer of the radioactive means so as to be interposed between the radioactive layer of the radioactive means and the material to be activated;

wherein the conductive metal layer is the wall of a hollow casing (wire cage *c*) of a conductive metal (see lines 61-64 in the left-hand column on page 2), and the radioactive layer of the radioactive means (radioactive mass *a*) is disposed inside the casing wherein the casing is a circular cylinder of a conductive metal which is flattened (“compressed to permit said cage to pass through the neck of a bottle...”, lines 76-78 on page 2) after inserting the radioactive layer of the radioactive means in the casing to hold the radioactive layer of the radioactive means therein.

Claims 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach to provide the casing that contains the radioactive material with a base member made of a conductive metal, closely attached to the casing and designed so as to be attached to the material to be activated, wherein the base member is formed by nesting a plurality of polygonal, annular members.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack I. Berman whose telephone number is (571) 272-2468. The examiner can normally be reached on Monday-Thursday (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jack I. Berman/  
Primary Examiner, Art Unit 2881

jb  
3/9/09